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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,271	03/17/2004	Katsufumi Ohmuro	2803.70099	4200

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EXAMINER

DUONG, TAI V

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/802,271

Applicant(s)

OHMURO ET AL.

Examiner

Tai Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-21 and 32-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-34 is/are allowed.
- 6) ☒ Claim(s) 9-17, 20 and 21 is/are rejected.
- 7) ☒ Claim(s) 18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-13,16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakamoto et al (Pub. No. US 2002/0118326).

Note Figs. 3, 4A-B, 5A-B, 6, 9 and 11A-B which identically disclose the claimed liquid crystal display device comprising a transparent electrode 78; a reflecting plate 70 having wrinkle-like unevenness on the surface thereof, the wrinkle-like unevenness having a plurality of protrusions (see Figs. 3, 6, 9, 11B); and a liquid crystal layer 54 provided between the transparent electrode and the reflecting plate, wherein *at least part* of the wrinkle-like unevenness 94 has a first linear part extending in a first direction, a second linear part extending from the top end of the first linear part in a second direction different from the first direction by certain angles to a predetermined side, and a third linear part extending from the top end of the second linear part in a third direction different from the second direction by certain angles to the predetermined side (corresponding to the three sides of the mesh-like projections 94), and a structure 66 provided beneath the reflecting plate and having unevenness, wherein the wrinkle-like unevenness of the reflecting plate is almost in accordance with the unevenness of the structure. . See discussions of the recited features in paragraphs 0038-0058 and 0062.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto et al (Pub. No. US 2002/0118326).

The only difference the LCD device of Sakamoto et al and that of the instant claim is Sakamoto et al are silent about the difference between the first direction and the second direction and the difference between the second direction and the third direction being equal to or less than 45° . Thus, it would have been obvious to a person of ordinary skill in the art to have the difference between the first direction and the second direction and the difference between the second direction and the third direction being equal to or less than 45° for the ease of fabrication of the structure provided beneath the reflecting plate and having unevenness.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto et al (Pub. No. US 2002/0118326) in view of Sugiura et al (Pub. No. US 2004/0145689).

The only difference the LCD device of Sakamoto et al and that of the instant claim is the average tilting angle of the wrinkle-like unevenness being 5 to 15 . Sugiura et al disclose in Fig. 27 that it was known to employ the average tilting angle of the wrinkle-like unevenness being 5 to 15 (paragraph 0166). Thus, it would have been obvious to a person of ordinary skill in the art in view of Sugiura et al to employ the

average tilting angle of the wrinkle-like unevenness being 5 to 15 in Sakamoto et al for obtaining high reflectance.

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto et al (Pub. No. US 2002/0118326) in view of Applicant's Prior Art Disclosure (APAD).

APAD discloses that it was known to employ a vertically aligned type using n-type liquid crystal and the reflecting plate having a light transmission domain and a display of a transmission type and a display of a reflection type being possible (instant specification, pages 2-4). Thus, it would have been obvious to a person of ordinary skill in the art to employ in Sakamoto's LCD device a vertically aligned type using n-type liquid crystal and the reflecting plate having a light transmission domain for obtaining a LCD device with high contrast and good visibility in bright and dark environments.

Claims 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 18 and 19 are allowed for the same reasons set forth in the last Office Action.

Claim 33 is allowed over the prior art of record because none of the prior art discloses or suggests a LCD device having the combination of the feature "a reflecting plate having wrinkle-like unevenness on the surface thereof, the wrinkle-like unevenness having a plurality of protrusions" and the feature "said plurality of protrusions are *arranged in parallel with each other* when viewed from a direction perpendicular to the reflecting plate, and *each* of the protrusions has a first linear part

extending in a first direction, a second linear part extending from the top end of the first linear part in a second direction different from the first direction by certain angles to a predetermined side, and a third linear part extending from the top end of the second linear part in a third direction different from the second direction by certain angles to the predetermined side". Claims 33 and 34 are also allowed since they depend on claim 32.

Applicant's arguments filed 03/16/06 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the wrinkle-free unevenness having an ordered pattern) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). It is noted that claim 9 recites *at least part* of the wrinkle-like unevenness.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication should be directed to Tai Duong at telephone number (571) 272-2291.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

TD

TVD

05/06


JAMES DUDEK
PRIMARY EXAMINER